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Federal Communications Commission
Office of the Secretary

In the Matter of NFL ENTERPRISES LLC, Complainant, vs. COMCAST CABLE COMMUNICATIONS, LLC, A Division of COMCAST CORPORATION Defendant.		MB Docket No. 08-214 File No. CSR-7876-P REPORT OF DR. HAL J. SINGER
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INTRODUCTION

I. Counsel for NFL Enterprises ("Enterprises") has asked me to analyze from an economic perspective whether Comcast Cable Communications ("Comcast") discriminated against NFL Network on the basis of affiliation and the effect of that discrimination. I have also been asked to ascertain the fair-market value that Comcast would have paid to carry NFL Network had it not discriminated but instead carried NFL Network on its Expanded Basic tier, where Comcast carries its affiliated, national sports networks, Versus and the Golf Channel.

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2. As I explain in Section I, I find that Comcast's conduct toward NFL Network is discriminatory and exclusionary because Comcast, while carrying its affiliated channels (Versus and the Golf Channel) on its Expanded Basic tier, excludes NFL Network from Comcast's Expanded Basic tier. There is no efficiency justification for such conduct, further indicating that the differential treatment arises from Comcast's affiliation with Versus and the Golf Channel and its non-affiliation with NFL Network. Furthermore, Comcast's discriminatory conduct impedes NFL Network's ability to compete against Versus and the Golf Channel. According to economic theory, exclusionary conduct is anticompetitive if it forecloses rivals from the most efficient distribution channel¹ or it prevents rivals from achieving economies of scale.² The resulting anticompetitive effect leads to higher prices. Based on my review of the case material, I conclude that both theories of harm are applicable here.

3. I find that NFL Network and the relevant consumers—viewers and advertisers—have been harmed by Comcast's discriminatory conduct. In particular, Comcast's conduct harmed NFL Network by impairing its revenues and programming options. Comcast's conduct also harmed NFL Network by denying NFL Network scale economies and foreclosing it from the most efficient distribution channel on Comcast's network. Viewers are harmed because Comcast viewers pay higher fees to watch NFL Network and others who would value watching NFL Network lose the option of watching it. And, as a result of Comcast's discriminatory

1. See Thomas G. Krattenmaker & Stephen C. Salop, *Anticompetitive Exclusion: Raising Rivals' Costs to Achieve Power Over Price*, 96 YALE L. J. 209, 234-45 (1986) [hereinafter *Anticompetitive Exclusion*]; Einer Elhauge, *Defining Better Monopolization Standards*, 56 STANFORD L. REV. 253 (2003) [hereinafter *Defining Better Monopolization Standards*].

2. See Stephen C. Salop & David T. Scheffman, *Raising Rivals' Costs*, 73 AM. ECON. REV. 267 (1983) [hereinafter *Raising Rivals' Costs*]; James E. Hodder & Yael A. Ilan, *Declining Prices and Optimality When Costs Follow an Experience Curve*, 7 MANAGERIAL & DECISION ECON. 229 (1986); Michael L. Katz & Carl Shapiro, *Systems Competition and Network Effects*, 8 J. ECON. PERSP. 93 (1994); Dennis W. Carlton, *A General Analysis of Exclusionary Conduct and Refusal to Deal—Why Aspen and Kodak Are Misguided*, 68 ANTITRUST L. J. 659 (2001) [hereinafter *A General Analysis of Exclusionary Conduct*]; Michael Whinston, *Tying, Foreclosure and Exclusion*, 80 AM. ECON. REV. 837 (1990) [hereinafter *Tying, Foreclosure and Exclusion*].

conduct, advertisers likely face higher prices to advertise on all sports networks, including Comcast's affiliated sports networks. For these reasons, Comcast's discriminatory and exclusionary treatment of NFL Network is anticompetitive. In addition to generating anticompetitive effects, these harms also undermine the Commission's diversity goals.³

4. To determine whether Comcast's conduct could have been motivated by any efficiency justification, I also examine in Section I the value of NFL Network's programming relative to other national sports programming—including programming on Versus and the Golf Channel. I find that NFL Network is substantially more popular with viewers than either Versus or the Golf Channel. I also find that live NFL game programming of the sort carried on NFL Network enjoys significant viewer popularity outside of teams' home markets.

5. In Section II, I address the issue of remedy. I evaluate the fair-market value of NFL Network service—that is, the price that Comcast should (and presumably would) pay for carriage of NFL Network programming but-for its discriminatory conduct—by considering the contractual rates that other multi-channel video programming distributors (MVPDs), including many who directly compete with Comcast in the same geographic markets, have voluntarily agreed to pay to carry NFL Network programming. This evaluation is intended to justify the proposed remedy to be submitted by Enterprises. It also demonstrates that Comcast's purported price-related justifications for its discriminatory treatment of NFL Network are unfounded.

6. The proposed remedy calls for Comcast to carry NFL Network on the same tier (Expanded Basic) on which it carries its affiliated national sports networks—Versus and the Golf

3. Alongside competition and localism, the Commission has explicitly stated that diversity was a distinct objective that would guide its actions in regulating providers of various media. *See* In the Matter of 2002 Biennial Regulatory Review – Review of the Commission's Broadcast Ownership Rules and Other Rules Adopted Pursuant to Section 202 of the Telecommunications Act of 1996, Report and Order and Notice of Proposed Rulemaking, MB Dkt. No. 02-277 (rel. July 2, 2003), ¶ 17 ("We identified diversity, competition, and localism as longstanding goals that would continue to be core agency objectives in this area [regulating media ownership].").

Channel—at a Net Effective Rate (“NER”) consistent with the rates paid by other MVPDs that carry NFL Network on a highly penetrated tier. Given the variation in the NER paid by MVPDs that carry NFL Network, I use a regression analysis to estimate the fair-market price that Comcast would pay for carriage of NFL Network programming on Comcast’s Expanded Basic tier. This analysis is informed by the characteristics and prices paid by other MVPDs for carriage of NFL Network programming, including the duration of the contract between the MVPD and NFL Network and the number of the MVPD’s subscribers. These data provide the single best source of information regarding the appropriate fair-market price because they reflect the *actual prevailing prices in the market*. Importantly, because other MVPDs are willing to pay market rates to carry NFL Network programming, the market price also shows that the price Comcast agreed to pay NFL Network cannot justify Comcast’s discriminatory treatment.

7. I conclude that absent Comcast’s discriminatory conduct, Comcast would pay NFL Network an NER of _____ per subscriber per month in 2008. The 95 percent confidence interval around this prediction is _____ to _____ per subscriber per month in 2008. I also calculate the annual fair-market price that Comcast should and presumably would pay (absent the discriminatory conduct) to carry NFL Network on its Expanded Basic tier for the period 2009-2012 based on the year-over-year annual growth rate in the NER paid for NFL Network by other MVPDs over that period. If Comcast rates rise in line with the rates paid by its rival MVPDs, it would pay a price (per subscriber per month) escalating from _____ in 2008 to _____ in 2012. My conclusions on these points are supported by the actual contract between Comcast and NFL Network, which (without accounting for Comcast’s discriminatory treatment) prescribes a NER that falls in the confidence interval of my regression analysis and thereby corroborates my econometric estimates of fair-market value.

QUALIFICATIONS

8. I am President of Empiris, LLC, an economics consulting firm based in Washington, D.C. My areas of economic expertise are antitrust, industrial organization, and regulation. I have applied my expertise to several regulated industries, including telecommunications, video programming, insurance, and health care.

9. I have published a book chapter in *Access Pricing: Theory, Practice and Empirical Evidence* (Justus Haucap and Ralf Dewenter eds., Elsevier Press 2005) and in *Handbook of Research in Trans-Atlantic Antitrust* (Philip Marsden, ed., Edward Elgar Publishing 2006). I am also the co-author of the book *Broadband in Europe: How Brussels Can Wire the Information Society* (Kluwer/Springer Press 2005).

10. I have published scholarly articles in several economics and legal journals, including *American Economic Review Papers and Proceedings*, *Berkeley Technology Law Review*, *Canadian Journal of Law and Technology*, *Federal Communications Law Journal*, *Harvard Journal of Law and Technology*, *Hastings Law Journal*, *Journal of Business and Finance*, *Journal of Competition Law and Economics*, *Journal of Financial Transformation*, *Journal of Industrial Economics*, *Journal of Insurance Regulation*, *Journal of Network Industries*, *Journal of Regulatory Economics*, *Journal of Telecommunications and High Tech Law*, *Review of Network Economics*, *Telecommunications Policy Journal*, *Topics in Economics Analysis and Policy*, and *Yale Journal on Regulation*.

11. Two of my articles are of particular relevance to this proceeding: "The Competitive Effects of a Cable Television Operator's Refusal to Carry DSL Advertising," *Journal of Competition Law and Economics* (Vol. 2, No. 2, pp. 301-331, 2006); and "Vertical Foreclosure in Video Programming Markets: Implications for Cable Operators," *Review of Network Economics* (Vol. 6, 2007).

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12. In regulatory proceedings, I have presented economic testimony in several forums, including the U.S. Federal Communications Commission, the U.S. Federal Trade Commission, the Antitrust Division of the U.S. Department of Justice, the U.S. National Highway Traffic and Safety Administration, the House of Commons of Canada, the Canadian Radio-television and Telecommunications Commission, and the U.S. Congressional Budget Office. My written testimony on the effect of telecom entry on cable television prices was cited by the Department of Justice in a November 2008 report entitled *Voice, Video and Broadband: The Changing Competitive Landscape and Its Impact on Consumers*.⁴

13. In addition to my work for NFL Network, I have served as an economic expert for MASN, which owns the television rights to live baseball games for the Baltimore Orioles and the Washington Nationals, in several carriage disputes. On June 2, 2008, the arbitrator in *TCR Sports Inc. v. Time Warner*, retired judge Daniel H. Margolis, ruled that Time Warner “did discriminate against MASN based on affiliation in not negotiating for carriage of MASN on an analog tier.”⁵ The arbitrator cited my analysis on behalf of MASN⁶ in support of his decision that MASN’s offer price “accurately reflects the fair market value of the rights to carry MASN in its North Carolina television territory.”⁷ In its October 30, 2008 *Order on Review* rejecting Time Warner’s appeal of the arbitrator’s decision, the FCC’s Media Bureau cited my oral testimony during Phase II in support of the proposition that “the carriage decisions of four of the largest MVPDs operating in North Carolina—that serve the overwhelming majority of non-TWC subscribers to

4. Department of Justice, *Voice, Video and Broadband: The Changing Competitive Landscape and Its Impact on Consumers*, Nov. 17, 2008, *available at* http://www.usdoj.gov/atr/public/press_releases/2008/239479.htm.

5. *TCR Sports Broadcasting Holding, L.L.P., d/b/a Mid-Atlantic Sports Network v. Time Warner Cable Inc.*, Case No: 71-472-E-00697-07, June 2, 2008, at 22.

6. *Id.* at 19, 19 n. 13, and 21.

7. *Id.* at 22.

paid television service in North Carolina—are an appropriate reference point for assessing fair market value.”⁸ I have followed a comparable methodology in this case.

14. I also serve as MASN’s economic expert in another carriage complaint that concerns Comcast’s refusal to carry MASN in the Harrisburg DMA (Pennsylvania) and the Tri-Cities DMA (Virginia).⁹ The FCC’s Media Bureau cited my testimony when it referred both MASN’s and NFL Network’s carriage complaints against Comcast to an administrative law judge.¹⁰

15. In addition to these carriage disputes, I have served as a testifying expert in several litigation matters, including a report on behalf of the Joint Sports Claimants before the Copyright Royalty Judges involving the allocation of distant royalties paid by cable operators. My experience as a testifying expert in litigation is summarized in my CV, which is attached to this report. In addition to litigation, I have written expert testimony in regulatory proceedings and commissioned white papers for several firms and trade associations, including 1-800 CONTACTS, Advanced Medical Device Manufacturers Association (AdvaMed), Allegheny Communications, AT&T, Bell Canada, BellSouth, Broadband Roundtable, Cellular Telephone Industry Association (CTIA), Coventry First, Fiber to the Home Council, General Motors, Harvest Partners, Internet Innovation Alliance, Medical Device Manufacturers Association (MDMA), National Association of Broadcasters (NAB), Qwest, SBC, TELUS, Verizon, and Walt Disney.

8. Order on Review, In the Matter of TCR Sports Broadcasting Holding, L.L.P., Complainant v. Time Warner, Defendant, Oct. 30, 2008, ¶47, n.186 [hereinafter *Order on Review*].

9. In the Matter of TCR Sports Broadcasting Holding, L.L.P., Complainant v. Comcast Corporation, Defendant, Complaint, filed July 1, 2008.

10. Memorandum Opinion and Hearing Designation Order, File Nos. CSR-7876-P, CSR-8001-P, Oct. 10, 2008, n. 345, 347, 348, 349, 351, 352, 353, 363, 372, 375, 379, 388.

16. Before joining Empiris, I was president of Criterion Economics, an economic consulting firm based in Washington D.C. Prior to that, I worked as a senior economist at LECG, an economic consulting firm based in Emeryville, California. In addition, I have worked as an economist for the Securities and Exchange Commission and the Army Corps of Engineers, and I have taught microeconomics and international trade at the undergraduate level.

17. I earned M.A. and Ph.D. degrees in economics from the Johns Hopkins University and a B.S. *magna cum laude* in economics from Tulane University.

18. I file this report in my individual capacity. I have no financial stake in the outcome of this case. My hourly rate in this matter is \$495.

I. COMCAST'S DISCRIMINATORY CONDUCT IS ANTICOMPETITIVE

19. Comcast has abused its market power as an MVPD by discriminating against NFL Network in favor of its own national sports programming networks. Specifically, Comcast discriminated against NFL Network and abused its downstream power in the program distribution market by refusing to carry NFL Network on its Expanded Basic tier—the same tier on which it carries Comcast-affiliated sports programming networks. Comcast's actions were in retaliation for the NFL's refusing to sell Comcast a package of eight live football games.

20. Comcast's discriminatory and retaliatory conduct here is not unprecedented. In a case in which I served as economic expert, Comcast refused to carry MASN on its Expanded Basic tier after Major League Baseball awarded the television rights of the Washington Nationals to MASN and not to a Comcast-owned sports network. Such a refusal to deal was tantamount to demanding equity in the programming as a condition of carriage—a demand that is expressly

prohibited by the Cable Act.¹¹ Pursuant to the Commission's approval of the Comcast-Adelphia merger, the Commission required that Comcast and MASN enter into binding arbitration. Rather than submit to arbitration, Comcast granted MASN access to its Expanded Basic tier.¹²

A. Comcast Discriminates Against NFL Network on the Basis of Affiliation

21. Comcast discriminates on the basis of affiliation against NFL Network and other unaffiliated sports programmers.

This conduct is consistent with the behavior of a vertically integrated firm that seeks to maximize profits received in both the upstream and downstream market.¹⁴

22. Comcast carries its affiliated national and regional sports programming networks on its (analog) Expanded Basic tier. In contrast, Comcast generally carries sports networks that it does not own on its premium sports tier. The three exceptions are ESPN and ESPN2, which have considerable countervailing market power, and MASN, which received this placement as a result of the parties' settlement of a program carriage complaint. Table 1 illustrates Comcast's ownership-based disparate treatment of networks carried on its Washington, D.C. cable systems as of December 31, 2008.¹⁵

11. When Comcast has succeeded in extracting equity as a condition of carriage, as was the case for the Philadelphia Flyers, 76ers, and Phillies, Comcast has exploited its market position by refusing to provide rival MVPDs access to its affiliated sports programming, thereby maintaining its market power in the distribution market. See Hal J. Singer & J. Gregory Sidak, *Vertical Foreclosure in Video Programming Markets: Implications for Cable Operators*, 6 REV. NETWORK ECON. (2007).

12. The Cable Act expressly prohibits an MVPD from using its downstream market power to discriminate against unaffiliated programming networks and requires the Commission to act in circumstances where a complainant demonstrates anticompetitive discrimination. 47 C.F.R. § 76.1302(c).

13. ;

14. *Raising Rivals' Costs*, *supra* note 2, at 165 (discussing the form of raising rivals' costs wherein "[u]pstream profits are sacrificed but downstream profits rise disproportionately.").

15. Note that Table 1 does not include the recently launched MLB Network, which Comcast has carried on its D2 tier since January 1, 2009. Comcast owns a minority stake in MLB Network, which it apparently received in

TABLE I: COMCAST SPORTS TIERING IN WASHINGTON, D.C. BY AFFILIATION

Network	Channel Number	Affiliation	Tiering
VERSUS	7	Comcast	Expanded Basic Tier
ESPN	8	Disney, Hearst	Expanded Basic Tier
ESPN2	9	Disney, Hearst	Expanded Basic Tier
Comcast SportsNet	10	Comcast	Expanded Basic Tier
Golf Channel	11	Comcast	Expanded Basic Tier
MASN	42	Independent	Expanded Basic Tier
NFL Network*	180	Independent	Premium Sports Tier
BTN (Big Ten Network)	257	Independent	Premium Sports Tier
Horse Racing TV (HRTV)	259	Independent	Premium Sports Tier
TV Games Channel	260	Independent	Premium Sports Tier
Fox College Sports - Atlantic	262	News Corp.	Premium Sports Tier
Fox College Sports - Central	263	News Corp.	Premium Sports Tier
Fox College Sports - Pacific	264	News Corp.	Premium Sports Tier
Fox Soccer Channel	267	News Corp.	Premium Sports Tier
GOL TV	268	Independent	Premium Sports Tier
Speed Channel	271	News Corp.	Premium Sports Tier
NBA TV	273	Independent	Premium Sports Tier
College Sports TV	274	Viacom	Premium Sports Tier
NFL TV*	275	Independent	Premium Sports Tier
NHL Channel	276	Independent	Premium Sports Tier
Tennis Channel	277	Independent	Premium Sports Tier
NBA TV	749	Independent	Premium Sports Tier

Note: * "NFL TV" is the name provided by Comcast's Channel Lineup but appears to be a duplicate entry of NFL Network.

Source: Comcast Website – My Channel Lineup (using Zip Code 20006), available at <http://www.comcast.com/Customers/Clu/ChannelLineup.ashx?print=1&CGID=5062>.

B. Comcast's Exclusionary Conduct Cannot Be Justified as Efficient Based on Viewer Popularity

23. In this section, I analyze Nielsen viewing data to assess the relative popularity of NFL Network vis-à-vis Comcast-affiliated national sports networks. The purpose of this section is to determine whether Comcast's refusal to carry NFL Network on Comcast's Expanded Basic

return for agreeing to provide MLB Network with better carriage terms (that is, for carriage on D2 rather than a less penetrated tier such as the Premium Sports Tier). See Richard Sandomir, *A Network to Satisfy the Appetite of Baseball-Hungry Fans*, N.Y. TIMES, Oct. 2, 2008, available at http://www.nytimes.com/2008/10/03/sports/baseball/03sandomir.html?_r=2&em ("Baseball is swapping one-third ownership of its channel with DirecTV, Comcast, Time Warner and Cox for wide distribution, thus avoiding the kind of ongoing distribution turf war that the NFL Network is having with Big Cable."). The apparent lesson here is that Comcast demands equity as a condition of avoiding carriage on a premium sports tier.

tier can reasonably be justified by considering popularity of programming as an efficiency defense.¹⁶

1. NFL Network Is More Popular Than Comcast-Affiliated Programming

24. Comcast's inferior treatment of its unaffiliated rival here cannot be justified by efficiency considerations because the affiliated networks that it places on its Expanded Basic tier are less desirable than NFL Network. This fact is best illustrated with ratings data. Nielsen is a widely used source of ratings data for U.S. cable networks. Nielsen provides two television ratings for each network for each month: (1) the "total day" rating and (2) the "prime time" rating. Table 2 presents the total day ratings for NFL Network and two Comcast-affiliated national sports networks, the Golf Channel and Versus (formerly the Outdoor Life Network, or "OLN," which changed its name to Versus in April of 2006¹⁷). Table 3 presents the equivalent "prime time" ratings.

16. The cost of carriage is another possible efficiency defense, but it provides no justification for the discrimination in this case. ;

17. *Outdoor Life Network to become vs.*, USA TODAY, Apr. 24, 2006, available at http://www.usatoday.com/life/television/news/2006-04-24-outdoor-life-network-name_x.htm.

TABLE 2: NIELSEN "TOTAL DAY" RATINGS, 2006Q4 TO 2008Q4

		NFL Network	Golf Channel	Versus
2006	Q4*	0.25	0.06	0.09
2007	Q1	0.12	0.11	0.09
	Q2	0.09	0.09	0.10
	Q3	0.17	0.09	0.11
	Q4	0.23	0.06	0.09
2008	Q1	0.13	0.13	0.11
	Q2	0.09	0.10	0.13
	Q3	0.18	0.07	0.10
	Q4	0.24	0.05	0.11
Average		0.16	0.09	0.10

Source: *National People Meter – Household Live and Same-Day Coverage Rating*, NIELSEN (2009) (Nov. 2006 to Dec. 2008).

Notes: The averages are based on the average of each month's ratings.

* Denotes data for November through December 2006 because NFL Network ratings for October 2006 were not available.

As Table 2 indicates, NFL Network receives substantially higher ratings than either Versus or the Golf Channel. Furthermore, NFL Network is more popular year-round than either Comcast-affiliated network; NFL Network has an average total day rating of 0.16 compared to Comcast-affiliated averages of 0.09 (Golf Channel) and 0.10 (Versus). It bears emphasis that the Nielsen ratings do not reflect only the popularity of the regular-season NFL games in the eight-game package, but instead represent the broad popularity of NFL Network. Specifically, Nielsen's total day ratings compare *average* ratings across the *entire day* and furthermore include months during which NFL Network did not air live regular-season NFL game programming. They compare all programming on NFL Network to all programming on the Comcast-affiliated networks.

25. The total-day ratings data also indicate that NFL Network's best quarter is significantly better (0.25 rating) than the best quarter of either Comcast-affiliated network (each of which received its highest rating at 0.13). Similarly, NFL Network's weakest quarters—

during the professional football offseason¹⁸—were equal to or better than the Comcast-affiliated networks' worst quarters. Between the fourth quarter of 2006 and the fourth quarter of 2008, NFL Network had a low quarterly rating of 0.09, which occurred twice. By comparison, the Golf Channel had a low quarterly rating of 0.05 and Versus had a low quarterly rating of 0.09, which occurred three times. Despite their significantly weaker total-day ratings, Comcast places both of its affiliated national sports networks—the Golf Channel and Versus—on its Expanded Basic tier while at the same time placing NFL Network on its Premium Sports tier.

26. NFL Network is also significantly more popular during “prime time” than the Comcast-affiliated national sports networks. Prime time ratings are particularly important because they represent the average rating during peak television viewership—7 PM to 12 AM. Prime time is also important because, as the time of peak viewership, it is also the time when networks and MVPDs can command the highest advertising rates. As Table 3 indicates, NFL Network consistently commands prime time ratings that exceed those of its Comcast-affiliated rivals.

18. See, e.g., NFL Network, Games on NFL Network, *available at*: <http://www.nfl.com/nflnetwork/games> (showing NFL Network-televised games between August 17, 2008 and December 20, 2008 for the 2008 NFL season).

TABLE 3: NIELSEN "PRIME TIME" RATINGS, 2006Q4 TO 2008Q4

		NFL Network	Golf Channel	Versus
2006	Q4*	0.64	0.11	0.17
2007	Q1	0.17	0.18	0.18
	Q2	0.11	0.14	0.24
	Q3	0.24	0.15	0.19
	Q4	0.58	0.09	0.19
2008	Q1	0.18	0.21	0.21
	Q2	0.11	0.14	0.34
	Q3	0.27	0.11	0.17
	Q4	0.58	0.08	0.22
<i>Average</i>		<i>0.31</i>	<i>0.13</i>	<i>0.21</i>

Source: National People Meter – Household Live and Same-Day Coverage Rating, NIELSEN (2009) (Nov. 2006 to Dec. 2008).

Notes: The averages are based on the average of each month's ratings.

* Denotes data for November through December 2006 because NFL Network ratings for October 2006 were not available.

As Table 3 demonstrates, NFL Network prime time ratings compare favorably to the ratings achieved by both the Golf Channel and Versus. NFL Network compares particularly favorably against the Golf Channel, as it was more than twice as popular as the Golf Channel (an average prime time rating of 0.31 versus Golf's 0.13) for the period from late 2006 to late 2008. NFL Network ratings also far exceed those of Versus (0.31 compared with Versus's 0.21). Similarly, the highest average quarterly prime time rating of NFL Network (0.64) far exceeds the highest corresponding rating for either Comcast-affiliated network (0.21 for the Golf Channel and 0.34 for Versus). These data, coupled with the analyses set forth in Section I.C. and Section II, demonstrate that Comcast lacks any plausible efficiency justification for refusing to carry NFL Network on Comcast's Expanded Basic tier.¹⁹

19. As discussed in my analysis of other MVPD contracts in Section I.C. and Section II, cost is no more plausible an efficiency justification than popularity.

2. There Is Substantial National Demand to View “Out-of-Market” NFL Games

27. The total-day and prime-time Nielsen ratings understate the enormous appeal of NFL Network’s marquee programming—especially its eight regular-season NFL games—to a broad national audience. Specifically, Nielsen ratings for several television events carried on NFL Network since the inception of the eight-game package (in late 2006) reveal a broad nationwide interest in out-of-market NFL games that extends well beyond the DirecTV customers who subscribe to NFL Sunday Ticket.²⁰ A late-season Thursday-night game between the Dallas Cowboys and Green Bay Packers, for example, drew 10.1 million viewers on NFL Network.²¹ The impressive audience for that game indicated that almost *one out of every four MVPD subscribers* who had access to NFL Network actually watched this game.²² Media analysts pointed out that this estimate did not include: (1) the in-region Dallas and Wisconsin areas where the game was broadcast locally, and (2) the significant sports-bar viewing by those unable to watch the game at home.²³

28. A review of the ratings for particular programs confirms the enormous popularity of NFL Network vis-à-vis Comcast-affiliated networks. Table 4 presents the 20 highest rated

20. The NFL Sunday Ticket is a package of live, Sunday afternoon out-of-market NFL games available exclusively to DIRECTV customers. Comcast argued that most fans who would want to view NFL Network programming already have Sunday Ticket. *See In the Matter of NFL Enterprises LLC v. Comcast Cable Communications LLC*, File No. CSR-7876-P, Answer of Comcast Cable Communications, LLC, June 20, 2008, ¶ 53 (“Comcast’s decision was further informed by its marketplace experience and its reasonable assumption that many hard-core NFL fans defected years ago to DirecTV as a result of the NFL Sunday Ticket package appearing exclusively on DirecTV.”). Other MVPD carriage decisions and Nielsen ratings data reveal that this assumption is simply fallacious. *First*, many other MVPDs carry the NFL Network *and* the live eight-game package. This programming is different than the Sunday Ticket because it provides Thursday and Saturday night games rather than Sunday afternoon games. *Second*, Nielsen ratings data indicate that the NFL Network receives very high ratings, and thus there is substantial viewer interest—including interest among cable subscribers—in NFL Network programming.

21. Anthony Crupi, *ESPN Sports Another Cable Ratings Victory*, MEDIAWEEK, Dec. 4, 2007. (“On the individual program side, the under-distributed NFL Network whipped up a huge audience Thursday night with its preview of the NFC Championship Game, averaging 10.1 million viewers, or nearly a quarter of the channel’s national footprint.”).

22. *Id.*

23. *Id.*

NFL Network programs between late 2006 and the end of 2008. To provide a direct comparison of the nationwide appeal of NFL Network programming relative to programming carried by Comcast-affiliates Versus and the Golf Channel, Table 4 also presents the twenty highest rated programs shown on either the Golf Channel *or* the Versus network. Table 4 is generous to Comcast because it compares the highest rated programs from January 1, 2003 to December 31, 2008 for *two* Comcast networks to the highest rated programs from October 30, 2006 to December 31, 2008 for the sole NFL Network. Versus/OLN/Golf Channel data cover a substantially larger number of programs on more networks over a longer period, with a greater opportunity to carry more highly rated events.

TABLE 4: TWENTY HIGHEST RATED PROGRAMS ON NFL NETWORK, THE GOLF CHANNEL, AND OLN/VERSUS, 2003-2008*

Rank	Program	Date	Household Rating**
<i>NFL Network</i>			
1	PACKERS VS. COWBOYS	11/29/2007	14.64
2	RAVENS VS. COWBOYS	12/20/2008	9.22
3	COWBOYS VS. FALCONS	12/16/2006	7.54
4	JETS VS. PATRIOTS	11/13/2008	7.49
5	COWBOYS VS. PANTHERS	12/22/2007	7.47
6	BRONCOS VS. CHIEFS	11/23/2006	6.84
7	BEARS VS. REDSKINS	12/6/2007	6.77
8	COLTS VS. JAGUARS	12/18/2008	6.58
9	PATRIOTS VS. GIANTS	12/29/2007	6.49
10	SAINTS VS. BEARS	12/11/2008	6.19
11	STEELERS VS. RAMS	12/20/2007	5.65
12	BENGALS VS. STEELERS	11/20/2008	5.57
13	BRONCOS VS. TEXANS	12/13/2007	5.49
14	VIKINGS VS. PACKERS	12/21/2006	5.36
15	GIANTS VS. REDSKINS	12/30/2006	5.31
16	CARDINALS VS. EAGLES	11/27/2008	5.3
17	RAVENS VS. BENGALS	11/30/2006	5.22
18	BRONCOS VS. BROWNS	11/6/2008	5.11
19	COLTS VS. FALCONS	11/22/2007	4.99
20	49ERS VS. SEAHAWKS	12/14/2006	4.86
<i>Golf Channel / OLN / Versus</i>			
1	TOUR DE FRANCE	7/24/2005	2.08
2	NHL STANLEY CUP	5/26/2008	1.97
3	NHL STANLEY CUP	5/24/2008	1.81
4	NHL CONFERENCE FINALS	5/11/2008	1.77
5	PGA TOUR	2/24/2008	1.65
6	TOUR DE FRANCE	7/25/2004	1.63
7	TDF POST RACE	7/26/2003	1.58
8	NHL CONFERENCE FINALS	5/15/2008	1.54
9	TOUR DE FRANCE	7/26/2003	1.53
10	WORLD EXTREME CAGEFIGHTING	6/1/2008	1.53
11	SPRINT POST GAME	2/22/2008	1.44
12	PGA TOUR	2/22/2008	1.39
13	NHL CONFERENCE FINALS	5/13/2008	1.39
14	NHL CONFERENCE FINALS	5/9/2008	1.31
15	SPRINT PRE GAME	2/24/2008	1.3
16	TOUR DE FRANCE	7/17/2005	1.29
17	TOUR DE FRANCE	7/23/2005	1.27
18	PAC-10: OREGON VS. OREGON ST.	11/29/2008	1.26
19	PGA TOUR	2/23/2007	1.25
20	PGA TOUR	5/5/2007	1.25

Source: *Galaxy Explorer* (minimum 25 minute show ratings), NIELSEN (2009).

* Household Coverage Rating

** 1/1/03 to 12/31/08 for Golf Channel and for OLN/Versus; 10/30/06 to 12/31/08 for NFL Network.

As Table 4 indicates, NFL Network provides programming that is of significantly greater interest to the public than does either Versus or the Golf Channel. The discrepancy is so wide that *the top-ranked Versus or Golf Channel program would not even rank among the top twenty NFL Network programs*. Rather, the top-ranked Comcast-affiliated program of the past six-plus years

would rank as the 35th-highest ranked program if it had been shown on NFL Network.²⁴ Furthermore, 25 NFL Network programs other than live NFL games—such as pre- and post-game shows and the Rutgers vs. Kansas State college football game—received higher ratings than at least one of the Comcast-affiliated programs listed in Table 4 (that is, a rating above 1.25). Non-game programming on NFL Network, such as the Draft and the Combine, are also popular; for example, NFL Network coverage of Day 1 of the NFL Draft received an average rating of 0.86 over the six-and-one-half hour program.²⁵

29. Nielsen ratings data can also be used to examine the relative popularity of NFL regular-season games in “in-market” and “out-of-market” NFL cities. This analysis is a test of whether there is sufficient interest in live NFL programming in “out-of-market” locales; if there is substantial interest in such programming, then an MVPD may find it attractive to carry NFL Network outside of the competing teams’ home market(s). The most appropriate measures of in-market and out-of-market interest are the Nielsen ratings for NBC’s Sunday Night Football and ESPN’s Monday Night Football games, which (unlike the Sunday afternoon games) are shown nationwide during prime time. Table 5, below, provides the average in-market and average out-of-market Nielsen ratings for these two game packages.²⁶

24. *Galaxy Explorer* (minimum 25 minute show ratings), NIELSEN (2009). The Tour de France programming on OLN/Versus would rank between the NFL Network’s #34 (the post-game show following the Indianapolis-Jacksonville game on Dec. 18, 2008, which garnered 2.11 coverage rating) and the present #35 (the post-game show following the New Orleans-Chicago game on Dec. 11, 2008, which attracted a 2.07 coverage rating).

25. *Id.*

26. This analysis is based on a total of 30 DMAs with NFL teams. For more information, see the note associated with Table 5 and Appendix 3.

TABLE 5: AVERAGE IN-MARKET AND OUT-OF-MARKET RATINGS FOR NATIONALLY
TELEVIEWED PRIME TIME REGULAR-SEASON NFL GAMES, 2008 NFL REGULAR SEASON

NFL Week	ESPN Monday Night Football		NBC Sunday Night Football	
	In-Market	Out-of-Market	In-Market	Out-of-Market
1	40.2	8.9	19.3	9.8
1	*	*	35.7	12.5
2	26.0	6.9	**	11.5
3	39.9	13.0	39.3	13.8
4	20.0	8.8	30.2	11.2
5	41.5	8.8	38.6	10.1
6	40.6	8.0	26.3	8.9
7	23.0	8.4	18.3	7.1
8	23.8	7.8	40.1	11.9
9	40.0	8.5	*	*
10	43.2	9.3	24.8	11.4
11	18.9	8.5	35.9	13.1
12	37.4	8.3	36.1	10.6
13	38.7	8.3	32.3	10.0
14	22.5	6.9	32.4	8.8
15	31.5	8.3	29.0	14.6
16	26.2	7.2	29.3	12.3
17	36.3	9.1	34.0	10.1
<i>Season Average</i>	32.3	8.5	31.3	11.1

Source: Overnight DMA Household Ratings, NIELSEN (2009) (2008 NFL Regular Season).

Notes: The “in-market” rating represents the average rating (ESPN plus broadcast for Monday Night Football, NBC broadcast for Sunday Night Football) for the DMA(s) of the two competing teams. The “out-of-market” rating is the average rating (ESPN for Monday Night Football, NBC broadcast for Sunday Night Football) of the other DMAs with an NFL team.

* ESPN televised one game in Week 1; NBC televised two games in Week 1 but zero games in Week 9.

** Ratings not available for either home city due to Hurricane Gustav/Ike.²⁷

As Table 5 indicates, NFL regular-season games are very popular outside of the “home” markets of the competing teams.²⁸ The average in-market ratings (32.3 and 31.3) demonstrate the enormous appeal of NFL teams in their home markets. However, the out-of-market rating is also substantial. For example, the season average rating for NBC Sunday Night Football (11.1) is

27. Note that select ratings in out-of-market cities are also omitted by Nielsen in some weeks.

28. Note that this analysis includes NFL cities only. Thus, for example, the Week 1 ESPN Monday Night Football game between the Green Bay Packers and the Minnesota Vikings received an average rating of 40.2 in the Milwaukee and Minneapolis-Saint Paul markets and an average rating of 8.9 in all other NFL markets (for example, New York, Chicago, Philadelphia). Note that Milwaukee is considered an NFL market due to its proximity to Green Bay.

equivalent to the fourth-highest rated broadcast program shown during the entire week of February 9, 2009.²⁹ Out-of-market NFL game ratings also far exceed the ratings garnered by *any* contemporaneous programming carried on Versus or the Golf Channel.³⁰

30. Given the national distribution sought by national sports networks (including NFL Network, Golf Channel, and Versus), the popularity of sports programming outside of any of a sports league's home cities is an important consideration for MVPDs. Networks that provide sports programming with wide appeal in many markets have substantially greater value to a national MVPD than do networks whose appeal is more limited. Table 6 reports the league-city and non-league-city average broadcast ratings for the NHL and the NFL in 2007 and 2008.

29. See Nielsen Media Research, Top TV Ratings, on file with author, *available at*: <http://www.nielsenmedia.com/nc/portal/site/Public/menuitem.43afce2fac27e890311ba0a347a062a0/?vgnextoid=9e4df9669fa14010VgnVCM100000880a260aRCRD> (accessed Feb. 18, 2009).

30. See Table 4, which shows that the highest-rated Comcast-affiliated national sports program in 2008 was the Stanley Cup Finals (a rating of 1.97).

TABLE 6: NIELSEN BROADCAST RATINGS COMPARING CITIES
WITH AND WITHOUT LEAGUE TEAMS

WITH AND WITHOUT LEAGUE TEAMS			
Average Rating			Ratio
	League Cities	Non-League Cities	(Non-League Rating as a Percentage of League Rating)
2007			
NFL			
Regular Season	14.3	10.5	73
Post-Season	23.1	20.4	88
Championship (Super Bowl)	46.5	43.9	94
NHL			
Regular Season	1.5	0.9	60
Post-Season	1.9	1.0	53
Championship (Stanley Cup)	2.5	1.7	68
2008			
NFL			
Regular Season	13.8	10.3	75
Post-Season	21.0	18.4	88
Championship (Super Bowl)	43.9	42.4	97
NHL			
Regular Season	1.7	0.9	59
Post-Season	1.9	0.9	47
Championship (Stanley Cup)	5.9	2.4	41

Source: Arianna – Household Data, NIELSEN (2009).

Notes: See Appendix 3 for a list of NFL and NHL “league” cities.

Table 6 demonstrates the enormous popularity of live NFL regular-season games, including in markets without NFL teams. NFL regular-season games aired in non-NFL cities attracted approximately 75 percent of the ratings that those games attracted in NFL cities. Post-season NFL games were even more popular in non-NFL cities, garnering between 88 and 97 percent of the ratings in NFL cities. The NHL is less popular than the NFL by every measure. NHL programming receives significantly lower absolute broadcast ratings in its home cities and in

non-league cities. And the gap between NHL-city viewership and non-NHL city viewership is significantly greater than the equivalent gap for the NFL.³¹

C. Comcast's Exclusionary Conduct Cannot Be Justified Based on Competitive Cost Concerns Vis-à-vis Its In-Region MVPD Rivals

31. As I demonstrated above using the Nielsen ratings, Comcast discriminatory conduct lacks any efficiency justification related to popularity: NFL Network is more popular than Comcast's affiliated sports networks. Yet Comcast might claim that carrying NFL Network on its Expanded Basic tier would increase its Expanded Basic rate, which would make it less competitive vis-à-vis in-region MVPD rivals such as DirecTV and Dish Network. This claim is undermined by the fact that Comcast did *not* reduce its D2 tier price when it removed NFL Network from its D2 tier.³² Moreover, as Table 7 shows, NFL Network is carried by several of Comcast's largest in-region rivals on highly penetrated tiers.³³

31. That is, non-NHL city viewership is only 41 to 68 percent of viewership in NHL league cities whereas non-NFL city viewership is a much stronger 73 to 97 percent of that in NFL league cities.

32. {

33. NFL Network is carried by over 200 MVPDs on highly penetrated tiers.

TABLE 7: NFL NETWORK CARRIAGE BY SEVERAL OF COMCAST'S IN-REGION MVPD RIVALS

Rival In-Region MVPD	Tier	Percent Subscribers (lower bound)
Verizon	FIOS TV Premier (Expanded Digital-Not part of Sports Tier)	
DirecTV	DirecTV Select Choice Package (Same Tier as ESPN)	
Dish Network	America's Top 100+ Expanded Basic	
AT&T	U200 Tier	

Source: These data are based on the most recently available internal NFL subscriber counts (July 31, 2008) and on the total subscriber counts provided by the firms in government filings. *See* Comcast Corp., SEC Form 10-Q (filed Oct. 29, 2008), at 23; DirecTV Group Inc., SEC Form 10-Q (filed Nov. 6, 2008), at 32; Dish Network, SEC Form 10-Q (filed Nov. 9, 2007), at 425; Verizon Communications Inc., SEC Form 10-O (filed Oct. 28, 2008), at 19.

Note:

Table 7 demonstrates that Comcast would not be disadvantaged vis-à-vis its in-region MVPD rivals if it carried NFL Network on its Expanded Basic tier. Any inflationary pressure caused by carriage of NFL Network programming on the Expanded Basic tier would be felt at least symmetrically by Comcast's in-region rivals.³⁴

D. The Economic Analysis of Exclusionary Conduct

32. A vertically integrated cable operator that discriminates against an unaffiliated national sports programming network—and thereby excludes a rival from its highly penetrated tiers—acts anticompetitively to the extent that such activity leads to a reduction in consumer welfare. That is, anticompetitive discrimination is: (1) conduct that harms a rival and (2) conduct that, by harming a rival, also harms consumers. The relevant consumers here are viewers and advertisers. By refusing to carry a rival national sports programming network on its highly penetrated tiers, a vertically integrated cable operator may (1) deny upstream rival programmers

34. The fact that some of Comcast's out-of-region rivals, such as Time Warner, may also engage in discriminatory conduct towards the NFL Network is not as relevant, as Comcast's price is primarily determined by the price of its in-region rivals.

access to the most efficient means of selling advertising and providing content to viewers and/or (2) prevent upstream programming rivals from achieving critical economies of scale. Both outcomes have the effect of raising a rival's costs. If rival sports programmers cannot impose the same degree of price-disciplining behavior on advertising prices or programming prices (vis-à-vis affiliated networks) as they would in the absence of the exclusionary conduct, those prices will rise, decreasing consumer welfare.³⁵

33. By refusing or conditioning a programmer's access to its highly penetrated tiers, Comcast may impair the competitiveness of unaffiliated sports networks such as NFL Network in two ways. First, such conduct may deprive rival sports networks of critical economies of scale.³⁶ Exclusionary conduct can impose barriers to entry and expansion that make rivals smaller, causing them to be less efficient when markets exhibit economies of scale, scope, research, or when markets display network effects.³⁷ Excluded from highly penetrated tiers, an unaffiliated programmer such as NFL Network cannot compete for viewers on equal terms with Comcast's affiliated sports programming. Viewers who wish to view NFL Network must incur higher costs due to the position of NFL Network on a premium channel tier. Because demand for any program is a decreasing function of its price, fewer subscribers will be exposed to NFL Network as a result of Comcast's discriminatory conduct. NFL Network would operate at a more efficient scale but for Comcast's discrimination because NFL Network's average cost per viewer declines as the number of viewers increases. If such exclusion prevents a rival from covering its

35. From an economic perspective, a firm with significant market power engages in anticompetitive behavior where no inefficiency would result from dealing with a rival and where denying access to rivals enhances monopoly power. See Einer R. Elhauge, *Defining Better Monopolization Standards*, 56 STANFORD L. REV. 253, 295-98, 305-14 (2003). Discriminatory treatment of rivals is much more anticompetitive because it cannot be justified by any effect on incentives to invest and it is less likely to be justifiable in terms of production efficiencies. *Id.*

36. See, e.g., ROBERT H. BORK, *THE ANTITRUST PARADOX* 372-373 (Free Press 1978); Tying, *Foreclosure and Exclusion*, *supra* note 2, at 837-60; *A General Analysis of Exclusionary Conduct*, *supra* note 2, at 659.

37. See *Anticompetitive Exclusion*, *supra* note 1. See also *Defining Better Monopolization Standards*, *supra* note 1.